

## **REMARKS**

### **Status of the Claims**

Claims 1-6, 8-17, 19-27, and 29-45 are pending in the above-identified application, with Claims 14-17, 19-27, and 29-45 being withdrawn due to a restriction requirement. Therefore, Claims 1-6 and 8-13 are currently under examination in the above-identified application. Claims 1, 14, 24, 34-37, and 39 are amended herein. Claims 12, 22, 32, and 44 are original. Support for the amendments is found throughout the specification. Accordingly, the amendments do not introduce new matter into this application.

### **Telephone Interview**

On February 1, 2006, Examiner Choi participated in a telephonic interview initiated by Applicants' undersigned representative. Present with the undersigned was Mr. Todd J. Obijeski. The above amendments and the remarks below reflect the substance of the interview. Applicants and their representatives thank Examiner Choi for his courtesy in conducting this interview.

### **Rejections Under 35 U.S.C § 102(b)**

Claims 1-6 and 8-13 are rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,370,940 to Hazlitt et al. ("*Hazlitt*"). Respectfully, this rejection is obviated by above amendments.

The PTO states that the use of "about" equates to a range of +/- 20% in the pending application. In view of the above amendments to independent Claims 1, 14, 24, and 34, this rejection is obviated. Additionally, dependent Claims 35-37 and 39 are amended herein to provide claim differentiation. Accordingly, Applicants respectfully assert that *Hazlitt* does not teach or suggest each and every element of the claimed invention. Accordingly, Applicants respectfully request that the rejection of Claims 1-6 and 8-13 under 35 U.S.C. § 102(b) in view of *Hazlitt* be withdrawn.

**Rejections Under 35 U.S.C. §§ 102(b) and 103(a)**

Claims 1-6 and 8-13 are rejected under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over U.S. Patent No. 6,239,059 to Saudemont et al. ("*Saudemont*"). Respectfully, this rejection is traversed. The above amendments have not been made in view of *Saudemont*.

The PTO states that *Saudemont* discloses a copolymer of ethylene and hexene in the presence of a catalyst system having a bridged metallocene compound,  $\text{Et(Ind)}_2\text{ZrCl}_2$ , and a silica or alumina solid support which is subsequently modified. See *Saudemont*, Example 34 on columns 17-18. From the prior Office Action (mailed June 16, 2005), the PTO stated that *Saudemont* was silent on specific polymer properties, but in view of the "substantially identical process to prepare the copolymer of ethylene and hexene, the copolymer of ethylene and hexene would possess the claimed properties."

Applicants respectfully disagree. The catalyst system used in *Saudemont* is NOT substantially identical to the catalyst system employed to produce the homopolymer or copolymer of the claimed invention. In *Saudemont*, the preparation of **solid support compound (1)**,  $\text{SiO}_2/\text{dibutoxyaluminumoxytriethoxysilane}/\text{O}_2/\text{F}$ , is described beginning on column 9, line 60, through column 10, line 28. A suspension of the silica support "is treated with 846 mg of dibutoxyaluminumoxytriethoxysilane (352.5 g/mol) at 50°C for 1 hour." (Emphasis added). *Id.*, column 10, lines 5-7. Additional heptane is added, followed by stirring, and then "the suspension is decanted in order to remove the supernatant liquid. The washing operation is repeated 3 times." *Id.*, column 10, lines 8-10. The resultant material is dried in dynamic vacuum, heat treated in a fluidized bed with argon, and finally heat treated in a fluidized bed with oxygen. Only then is the fluorine source introduced: "62 mg of  $(\text{NH}_4)_2\text{SiF}_6$  (178 g/mol) are then added" (*Id.*, column 10, line 20) to form a mixture, followed by another heat treatment in a fluidized bed with argon, to form solid support compound (1).

The rationale for the silanization treatment, as described by *Saudemont*, "results in a species derived from silicon being grafted on the surface of the support to make this surface more hydrophobic." *Id.*, column 2, lines 59-61. After this silanization, "the said support

particles thus grafted are then subjected to a fluorination treatment.” *Id.*, column 4, lines 32-33.

In sharp contrast, the chemically-treated solid oxide of the claimed invention is **devoid** of silane compounds – in particular, dibutoxyaluminumoxytriethoxysilane – and the silanization process used by *Saudemont* to produce the solid support compound of Example 34. Please see page 24, line 19, to page 36, line 18, of the pending application.

Thus, there is a significant difference between *Saudemont*’s **SiO<sub>2</sub>/dibutoxyaluminumoxytriethoxysilane/O<sub>2</sub>/F solid support compound (1)** and Applicants’ treated solid oxides. Because of this difference alone, **there is a significant deviation** of commonality between the catalyst system described in Example 34 of *Saudemont* and those employed by Applicants. In other words, the catalyst system of *Saudemont* is not substantially identical to those employed by Applicants to produce the homopolymers or copolymers of the claimed invention. Respectfully, it is well known to one of ordinary skill in the art that any change, whatsoever, in components of a catalyst system (e.g., metallocene compound, cocatalyst, activator-support, etc.) can give rise to substantially different polymer properties. Accordingly, one of ordinary skill in the art cannot conclude that the polymer of *Saudemont* teaches or suggests the claimed invention because the respective catalyst systems are **NOT** identical.

Applicants respectfully assert that both the catalyst system and the preparation process of the catalyst system of *Saudemont* are **not substantially identical** to that of the claimed invention. Hence, the underlying premise that *Saudemont* has a “substantially identical process” and thus would give similar polymer resin and film properties cannot be fairly concluded. Applicants’ respectfully assert that *Saudemont* does not inherently teach or suggest each and every element of the claimed invention, and therefore cannot anticipate the claimed invention, since the catalyst system of *Saudemont* consists of at least one different component and a different preparation process. Given the significant differences that catalyst system and preparation can have on polymer properties, and that the catalyst system employed by *Saudemont* is significantly different from those employed by

Applicants, Applicants respectfully assert that the PTO has not made a *prima facie* case of obviousness. Accordingly, Applicants respectfully request that the rejection of Claims 1-6 and 8-13 under 35 U.S.C. § 102(b) as anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over *Saudemont*, be withdrawn.

**Rejoinder of Group II-IV Claims 14-17, 19-27, and 29-45**

On page 2 of the Final Office Action mailed December 19, 2005, the Examiner states that in view of the prior amendments, Group II-IV claims will be rejoined with Group I Claims 1-6 and 8-13 if Group I is found allowable and Groups II-IV bear the inventive features cited in Group I.

Applicants respectfully maintain that the Group I Claims 1-6 and 8-13 are in condition for allowance. Hence, Applicants request to have Claims 14-17, 19-27, and 29-45 rejoined and allowed as well.

### CONCLUSION

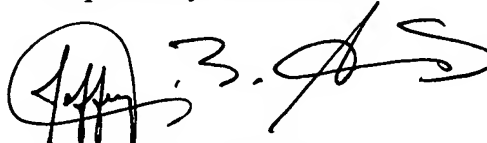
The foregoing is submitted as a full and complete Amendment and Response to the Final Office Action dated December 19, 2005. For at least the reasons given above, Applicants respectfully submit that Claims 1-6, 8-17, 19-27, and 29-45 define patentable subject matter. Accordingly, Applicants request allowance of these claims.

This Amendment and Response is being filed within two (2) months of the final action, therefore Applicants request that an Advisory Action be issued in this case.

No fees are believed due, however, the Commissioner is hereby authorized to charge any deficiencies which may be required, or credit any overpayment to Deposit Account No. 09-0528.

Should the Examiner believe that anything further is necessary in order to place the application in better condition for allowance, the Examiner is respectfully requested to contract Applicants' representative at the telephone number listed below.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Jeffery B. Arnold', with a stylized flourish extending to the right.

By: Jeffery B. Arnold  
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